



One of the challenges of building a small, decorative box is deciding how to align and attach the top to the base.

The most common way is hinges, but they can be time-consuming and fiddly to install. The simple rabbet joint works fine and leaves an attractive, clean look, but it can be troublesome, too.

The traditional method is to create a solid box, cut off the lid on the tablesaw, and then use a bearing-guided rabbeting bit to rout a rabbet on the inside of one piece and the outside of the other. You finish the joint by either squaring or rounding one set of corners and finessing the joint for a good fit. Simple to explain, harder to accomplish. Cleaning up and fine-tuning the inside rabbet is tedious

2 Fast Ways to

Think out of the box

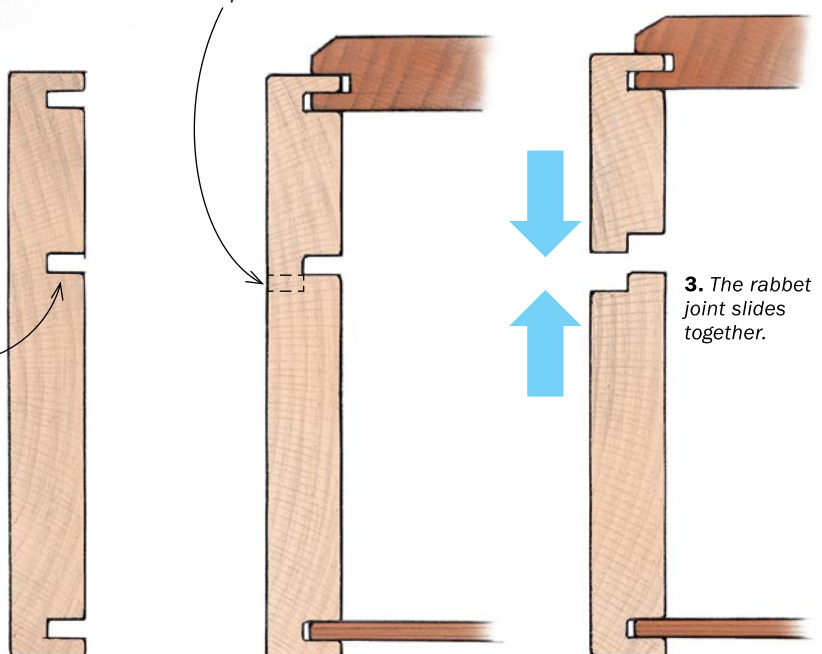
THE TRADITIONAL METHOD, STREAMLINED

The traditional method is to cut the box apart on the tablesaw and then rabbet the two parts, which is tedious and fussy. This method combines those steps into one. Also, because the section you need to take out is only the width of a single sawkerf, you can use wood with figure or swirly grain, and you'll end up with almost no jump in the pattern.

1. Before mitering the sides, cut grooves for the top and bottom in the normal way. But cut an additional groove on the tablesaw to serve as the inside part of what will become the rabbet joint.

2. After the box is glued up, cut the outside rabbet on the tablesaw. This cut also separates the lid from the base.

3. The rabbet joint slides together.



defined, and is done mostly by hand-sanding. I'm sure that's what kept my father, Helge Nyberg, an extremely accomplished woodworker, from using a rabbet joint on anything but the fanciest box. The joint is seductive, however.

My cousin Carl taught me a way to streamline the traditional method for a rabbeted lid, and then I came up with a radical new way that I call "the inside-out box." Either technique is much simpler than cutting the rabbets after the box has been glued up. The inside-out method works so well that I use it for functional boxes as well as for fancy work. I'd bet even old Dad would consider it.

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Build a Box

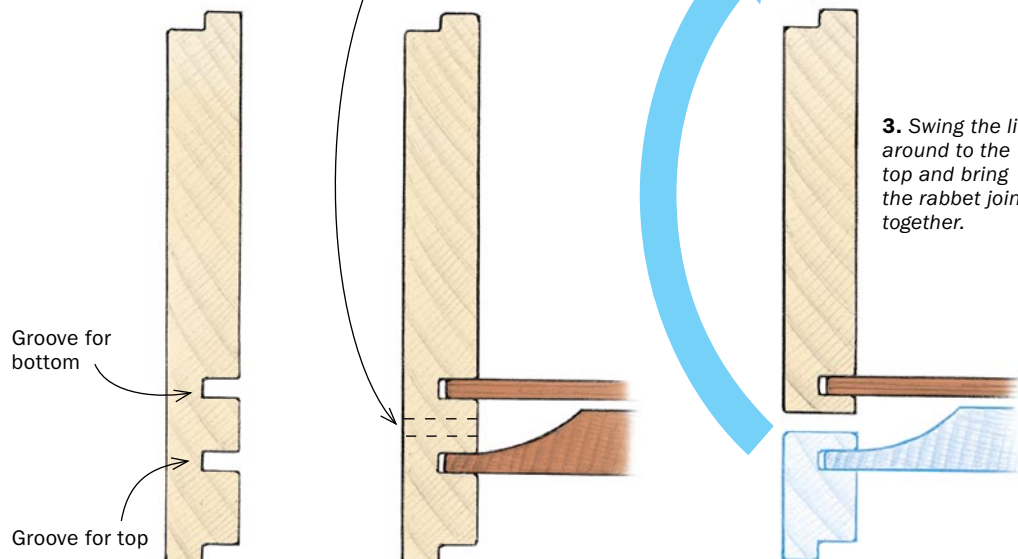
to simplify a rabbeted lid

BY BILL NYBERG

1. Cut and smooth both rabbets on either side of the board when the box sides are one long piece. Also, cut the grooves for the top and the bottom.

2. Glue up the box with the lid and bottom adjacent, then saw away the lid.

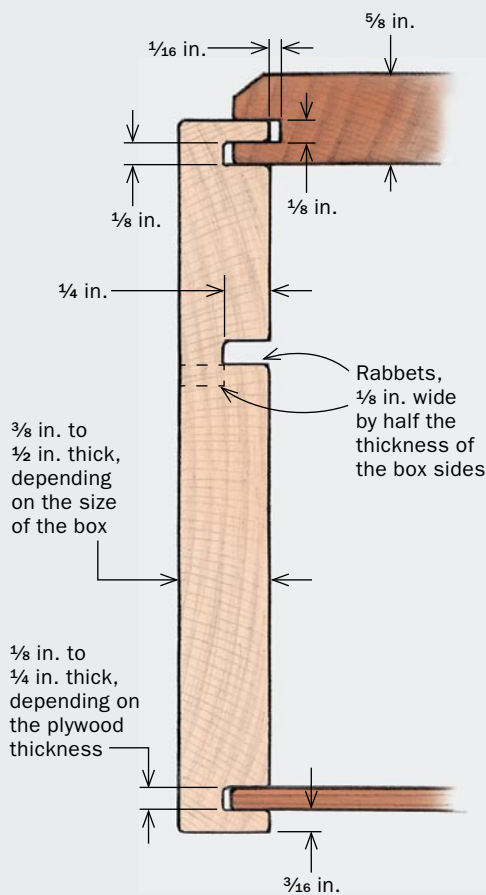
3. Swing the lid around to the top and bring the rabbet joint together.



THE REVOLUTIONARY INSIDE-OUT BOX

Even the streamlined version of the traditional method leaves an inside rabbet in the lid that is difficult to clean up. But Nyberg found a way to build the box inside out, letting him sand the rabbets before assembly. The downside of reversing the box and lid (see drawing at left) is poor figure and grain continuity. So choose fairly straight-grained boards. Vertical patterns such as tiger maple or small, random figure such as bird's-eye also work well.

Option 1: Cut one rabbet before assembly, one after



Take all four sides from one board. Mill it to the right thickness and width (taking into account the width of the rabbet), but leave it a little long to allow for planer and jointer snipe and possible redos when mitering.

While you're at the tablesaw, instead of just cutting grooves for the top and bottom of the box, cut the inside rabbet along the entire length of the workpiece. Now miter the corners and assemble the box, inserting the top and the bottom. You can use the masking-tape clamping method ("Tape: Unsung Hero of the Shop," *FWW* #205) or 45° clamping cauls, as shown. Once the glue has dried, use an offcut from the box sides to set the tablesaw fence so that the kerf creating the outside rabbet will be alongside the inside one. Also use the offcut to set the blade height so that it just meets the inside rabbet. Make the cut on all four sides, separating the lid and creating the rabbet joint at the same time.

CUT THE FIRST RABBET



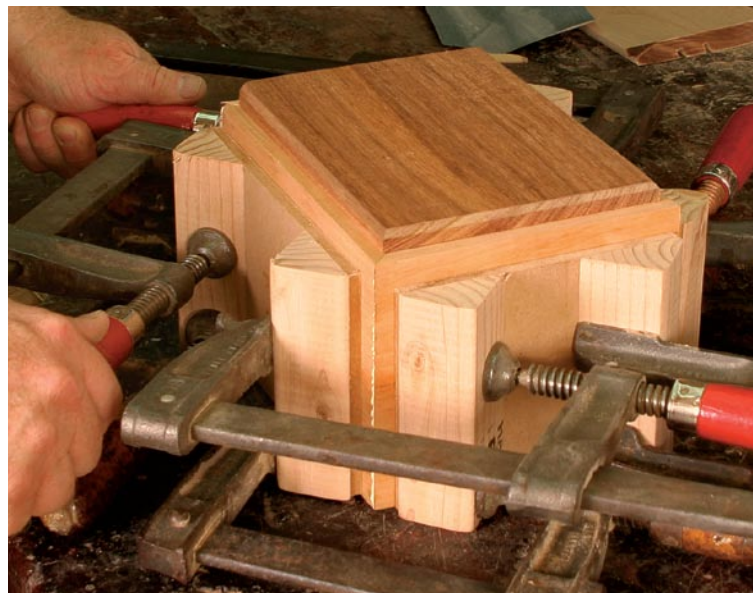
One piece, three grooves. While the sides of the box are one continuous piece, cut grooves for the top and bottom panels, and then cut a third groove that becomes the inside rabbet. Use a rip blade for these cuts; it leaves a square kerf.



Cut the miters. Use a tablesaw or chopsaw to miter the sides of the box.



GLUE UP THE BOX

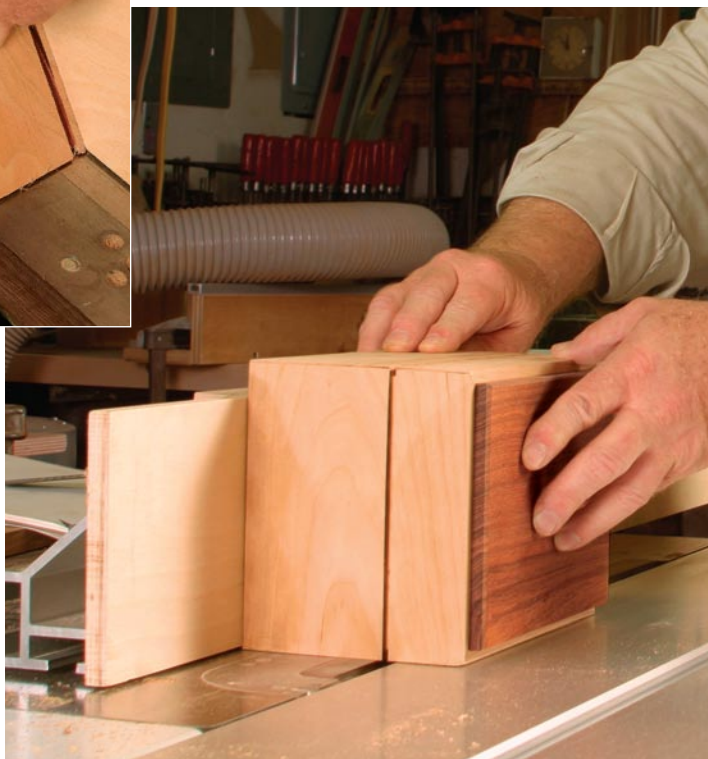


Assemble the box. You can reinforce the miters with biscuits. In any case, apply glue to the mitered ends, place the top and bottom panels in their grooves, and assemble the box (left). Use 45° blocks, glued to ¼-in.-thick MDF, to align the clamping force with the joint. Use light force from clamps resting on the bench to align the cauls with the box sides, and then apply the upper clamps, which are more centered on the joint (above).



Align the rabbet joint. Use an offcut from the box sides to set the tablesaw fence so that the outside rabbet will just touch the inside one.

CUT THE SECOND RABBET

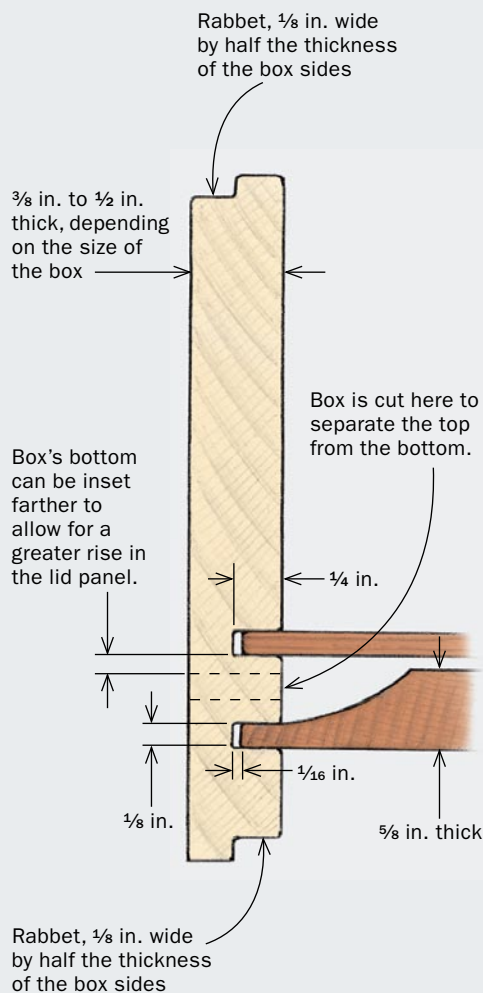


Cut the outside rabbet. Run all four sides across the blade, maintaining steady pressure against the fence. A tall auxiliary fence provides greater stability.



The rabbet revealed. Once the fourth side has been cut, the lid will come away, revealing the two halves of the rabbet joint. Sand or plane the rabbets to clean up the saw marks and fine-tune the fit.

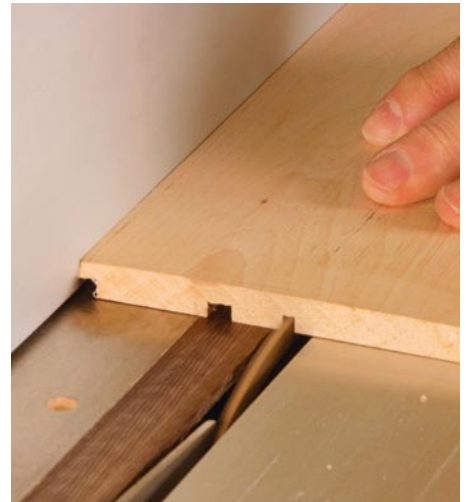
Option 2: Make the rabbets before making the box



Mill the board to the same specifications as the first method. Cut a rabbet along both long edges, but on opposite faces, the way you do when ship-lapping boards. You can do this with a bearing-guided rabbeting bit in a router, with the same bit or a straight bit in a router table, or with either a regular or dado blade on the tablesaw. Set the depth of the rabbets to just under half the thickness of the wood.

Next, cut grooves for the top and bottom panels. Their precise location is determined by the design of the box and the thickness of the lid panel. A full-size drawing is sometimes helpful to decide exactly where to cut the grooves and where you'll eventually cut apart the box. Before mitering the sides, use a shoulder plane

CUT ALL THE JOINERY



Cut rabbets and grooves. Cut the two parts of the rabbet joint on opposite edges of the board (left). Then cut the grooves for the top and bottom panels (right).



Easy cleanup. Trim and clean both continuous rabbets with a shoulder plane and a sanding block. Use a short section cut from one end to tell when the rabbet joint comes together flush.

ASSEMBLE THE BOX INSIDE OUT



Use the cauls again. Because the box is open, you can use a spring clamp to hold the cauls to the box sides. Place the top and bottom panels in their grooves with the outsides facing each other, and assemble the box. Align these miter joints carefully, as any inaccuracy will affect the fit of the rabbets.

and/or a sanding block to trim and clean up the two fully exposed continuous rabbets. Now assemble the box.

After the glue dries, cut apart the box between the top and bottom panels, switch the positions of the two pieces, and fit them together. If the fit is not perfect, it can be adjusted easily by trimming the half with the exposed rabbet. The interior rabbet is already finished and can be left alone.

Among the benefits of this method is that when the bottom and top are separated on the tablesaw, minor inaccuracies are easier to deal with than if the cut had formed the joint. Joints leave little room for error, but nobody knows if you sand away another fraction of an inch of the top or bottom.

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RIP IT AND FLIP IT

Cut the box in two. Set the blade height just greater than the thickness of the sides, and cut between the hidden top and bottom panels in a carefully marked location.



The inside-out box. With the cuts complete, the top and bottom of the box are revealed (left). Sand away the saw marks on the top and bottom edges (below). The rabbets should need very little trimming.

